

MWI 7120.4

REVISION B

EFFECTIVE DATE: June 14, 2002

EXPIRATION DATE: June 14, 2007

MARSHALL WORK INSTRUCTION

ED01

DOCUMENTATION PREPARATION, PROGRAMS / PROJECTS

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DOCUMENT HISTORY LOG

Status (Baseline/ Revision/ Canceled)	Document Revision	Effective Date	Description
Baseline		5/14/99	
Revision	A	7/10/00	General Revision. This revision supersedes document preparation, formatting, and numbering requirements, except drawings and parts lists, in MSFC-STD-555.
Revision	B	6/14/02	Clarify general and specific instructions to eliminate unnecessary details, eliminate inappropriate specific requirements of referenced military standards, and update footer.

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1. PURPOSE

The purpose of this document is to provide preparation instructions for all in-house Program/Project documentation and Multiprogram/Project common-use documentation in accordance with MPG 7120.3, Data Management, Programs/Projects.

2. APPLICABILITY

This instruction applies to programs and projects defined in MPG 7120.1, Program/Project Planning. Existing approved documents are not required to be reformatted to meet the latest revision of this instruction. External documents are prepared as specified by the originating entity or as specified in the contract. Departures from the documentation preparation and revision requirements specified herein are allowable to meet a unique Program/Project special need, unless such departures conflict with other NASA or MSFC requirements specified in Sections 6.1 and 6.2. The rationale and methodology for such departures shall be documented by the Program/Project in the Program Plan, Project Plan, or Data Management Plan, for example. The numbering system for drawings and parts lists in MSFC-STD-555 shall be used for flight products; however, it may be used for non-flight products. If this numbering system is not used for non-flight products, the substitute system shall be documented.

3. APPLICABLE DOCUMENTS

3.1 NPG 1441.1, "Records Retention Schedules"

3.2 NPG 2200.2, "Guidelines for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information"

3.3 MPD 2190.1, "MSFC Export Control Program"

3.4 MPG 2220.1, "Scientific and Technical Publications"

3.5 MPG 7120.1, "Program/Project Planning"

3.6 MPG 7120.2, "Multiprogram/Project Common-Use Documentation"

3.7 MPG 7120.3, "Data Management, Programs/Projects"

3.8 MPG 1440.2, "MSFC Records Management Program"

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3.9 MWI 7120.1, "Project Quality Plan"

3.10 MWI 7120.3, "Program/Project Data System (PDS)"

3.11 MWI 7120.5, "Data Management Plans, Programs/Projects"

3.12 MWI 8040.1, "Configuration Management Plan, MSFC Programs/Projects"

3.13 MSFC-STD-555, "MSFC Engineering Documentation Standard"

3.14 MIL-STD-961, "Defense Specifications"

3.15 MIL-STD-962, "Defense Standards and Handbooks"

4. REFERENCES

4.1 MPG 8040.1, "Configuration Management, MSFC Programs/Projects"

4.2 MWI 8040.2, "Configuration Control, MSFC Programs/Projects"

5. DEFINITIONS

The definitions in MPG 7120.3, MPG 7120.2, MWI 7120.3, and MWI 8040.1 apply.

5.1 Gender-Neutral Language. Terminology that eliminates sex discrimination in the language of regulations, guidelines, and policies.

5.2 Handbook (HDBK). A guidance document that enhances user awareness by providing engineering information; lessons learned; possible options to address technical issues; classification of similar items, materials, or processes; interpretative direction and techniques; and any other type of guidance information that may help the Government or its contractors in the design, construction, selection, management, support, or operation of systems, products, processes, or services.

5.3 Interface Control Drawing/Document (ICD). A drawing or document that depicts detailed quantitative physical and functional interfacing data of an item. These drawings or documents are used as design control documents, delineating

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interface engineering data coordinated for the purpose of: (a) establishing and maintaining compatibility between interfacing items; (b) controlling interface designs, thereby preventing changes to item requirements which would affect compatibility with interfacing subsystems; and (c) communicating design decisions and changes to participating activities.

5.4 Manual (MNL). A reference book or guidebook providing instructions.

5.5 Plan (PLAN). A detailed scheme, program, criteria, or method worked out prior to the accomplishment of a process, test, practice, etc.

5.6 Procedure (PROC). A set of established methods for performing or effecting a process, test, etc.

5.7 Report (RPT). An account or summation of the results of an activity, test, research, etc.

5.8 Requirements (RQMT) Document. Documentation defining essential needs or preferences for the development of an item, system, etc. (e.g., a requirements document justifies the need to develop an electronic system or a product to support an experiment.) NOTE: A requirements document is not the same as a specification or ICD.

5.9 Specification (SPEC). A document which clearly and accurately describes essential technical and interface requirements for products and also the verification requirements for determining whether those specification requirements are met.

5.10 Standard (STD). A document that establishes uniform engineering or technical criteria, methods, processes, and practices.

6. INSTRUCTIONS

6.1 Program/Project Documentation - General Preparation. Program/Project documentation shall be prepared in accordance with the format requirements of this document and the content requirements specified by the Program/Project, unless other Center procedures apply (e.g., specific Marshall work instructions which address the technical content of a Program/Project Plan [see MPG

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7120.1], Quality Plan [see MWI 7120.1], Configuration Management Plan [see MWI 8040.1], Data Management Plan [see MWI 7120.5], Scientific and Technical Publication [MPG 2220.1], drawings and parts lists [MSFC-STD-555], etc.). Program/Project documentation includes configuration documentation, Multiprogram/Project common-use documentation, and Program/Project-specific procedures, plans, requirements, manuals, reports, and other types of documentation as specified and defined in the Program's/Project's Data Management Plan. Applicable Program/Project-specific or Multiprogram/Project common-use documentation shall:

6.1.1 Be prepared by the OPR designee using compatible Center Integrated Desktop Service (IDS) applications. The OPR designee shall:

6.1.1.1 Ensure the use of gender-neutral language in the document.

6.1.1.2 Prepare (1) a new draft document for review, or (2) a revised draft document, identifying proposed changes in the currently approved document (i.e., use the Revision [Track Changes] tool in Word, record changes in the Document History Log). Clearly indicate that the document is a "DRAFT" and consecutively number and date each version of the draft document.

6.1.1.3 Coordinate proposed draft document or document changes with affected parties, and Drawing/Document Checking if applicable, to the extent determined necessary prior to issuing the draft.

6.1.2 Contain, as a minimum, the following data on each page of the document:

6.1.2.1 Unique document number

6.1.2.2 Revision level: Enter "Baseline" for initial release; the revision level for each change per paragraph 6.3.2; and, "Canceled" for cancellations.

6.1.2.3 Document title/subject

6.1.2.4 Effective date: Enter the date the approving authority approves the action.

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6.1.2.5 OPR organizational code

6.1.2.6 Document type: Each document shall be designated as a Multiprogram/Project Common-Use Document or a Program/Project Specific Document. The name of the specific program/project (e.g. Advanced Space Transportation Program, COBRA Main Engine Project) shall be used to designate the document as Program/Project Specific.

6.1.2.7 Page number and total number of pages (except the title page may be numbered or unnumbered page 1).

6.1.2.8 The following statement in the document footer:

CHECK THE MASTER LIST--
VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE
(Specific location of Master List may be entered)

6.1.3 Contain the signature of the approving authority for hard copy. For electronic documents, approving authority is recorded in the electronic database.

6.1.4 Contain notice(s) of availability limitation on the first page of draft and approved, unclassified Program/Project documentation to prescribe the availability and distribution of Program/Project documentation as defined in Chapter 1 of this document. This notice of availability includes those distributed via electronic media (e.g., World Wide Web, CD-ROM, etc.).

6.1.5 Contain a Document History Log. Beginning at the baseline, provide a chronological listing of document changes to record the document's history through all revisions, and, if applicable, the cancellation of the document. The Document History Log replaces the Specification Change Instruction/Document Change Instruction (SCI/DCI), MSFC Form 4140. The OPR designee shall identify the following in this log:

6.1.5.1 Status.

- (1) Baseline (enter at the initial release of the document).
- (2) Revision (enter for each revision to the document).
- (3) Canceled (enter upon cancellation of the document).

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6.1.5.2 Document Revision. Enter the revision letter(s) that apply.

6.1.5.3 Effective Date. Enter the date the baselined or revised document is approved or the date the document is approved for cancellation.

6.1.5.4 Description.

(a) For baseline, indicate this is the baseline release, e.g., "Baseline Release."

(b) Enter an identifier (for example, the section or paragraph number, the page number, etc.) and the description of the revision(s) made to the document with reasons for the revisions(s) if applicable; or

(c) Enter "General Revision" if revisions are too extensive to list.

(d) For canceled documents, supercession information may be entered.

6.1.6 Contain, as a minimum, numbered document sections for scope or purpose, applicable documents, definitions/acronyms, specific content sections as required, and records (identify records as specified in MPG 1440.2 and NPG 1441.1). Records shall be the last numbered section after any specific content sections but before any appendices. This requirement does not apply to standards, specifications, handbooks, ICDs, and those documents for which specific format and instructions are provided in other MSFC or applicable documents.

6.1.7 Templates created to assist in the preparation of documentation are optional for Program/Project-specific and mandatory for Multiprogram/Project common-use documentation, and are electronically accessible from the MSFC Home Page, >Library Ref/Doc Services, >MSFC Integrated Document Library, >Program/Project Documents, and at the following web address:

<http://masterlist.msfc.nasa.gov/pds/>

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6.2 Additional Instructions for Specific Document Preparation

6.2.1 Specification Preparation. A specification shall be prepared to define the requirements and the interfaces for a product. The product may be materials, parts, or software products of the configuration item to be developed. The specification shall be prepared in accordance with the six major sections defined in MIL-STD-961, Appendix A, with specific paragraph titles used as a guide as appropriate. Rules regarding format and style in MIL-STD-961 are not imposed by this requirement. The specification shall be prepared at the program/project/configuration item levels as necessary to define the development requirements for each configuration item. The specification will define the hardware, software, firmware, and external and internal interface requirements.

6.2.2 Standard Preparation. A standard shall be prepared in accordance with MIL-STD-962, Appendix A, and as specified in this document. Standards will not be used to define products. Standards are usually implemented through call-outs in specifications or engineering drawings.

6.2.3 Handbook Preparation. A handbook shall be prepared in accordance with MIL-STD-962, Appendix B, and as specified in this document. The handbook provides guidance and does not establish requirements or define a product.

6.2.4 Interface Control Drawing/Document (ICD) Preparation. An ICD, when required, shall be so identified in the configuration item specification. If an interface control "drawing" is specified, refer to MSFC-STD-555. If an interface control "document" is specified, refer to Appendix A of MIL-STD-961 on Interface Requirements. Note: Interface verification requirements shall be specified in Section 4 of the configuration item specification.

6.3 Documentation Numbering

6.3.1 Document Numbering. Configuration documentation, excluding drawings and parts lists, and MSFC Multiprogram/Project common-use documents shall be numbered with unique "MSFC-" numbers. Other Program/Project documents shall also use unique "MSFC-" numbers unless the Program/Project chooses to establish and document a Program/Project document numbering system in Program/Project procedures. "MSFC-" numbers are issued by the Release Desk or in accordance with MWI 7120.3 and shall be assigned as follows:

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		____ Sequentially assigned number, regardless of the type of document prepared ____ *Controlled abbreviation document type (3 or 4 characters) ____ Indicates MSFC document
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*Controlled abbreviations for document types stated above; others may be documented by the Program/Project:

BDGT	Budget
HDBK	Handbook
ICD	Interface Control Document
MNL	Manual
PLAN	Plan
PROC	Procedure
RPT	Report
RQMT	Requirements
SCHE	Schedule
SPEC	Specification
STD	Standard

For example, specifications shall be identified as follows: "MSFC-SPEC-1234;" standards shall be identified as: "MSFC-STD-2345;" handbooks shall be identified as: "MSFC-HDBK-3456." When an "MSFC-" document number is assigned, the document assigned the number must be baselined or the number canceled; the number will not be reassigned for another application.

6.3.2 Document Revision Level. The controlled document revision indicator will consist of the same document number as the one it superseded, plus the word "Revision" and the uppercase revision letter beginning with the letter "A." For each succeeding revision, a revision letter will be assigned in alphabetical sequence through the letter "Z." After Z, follow with AA, AB, AC, etc. (e.g., MSFC-SPEC-1940 Revision A).

6.3.3 Drawing Numbering. Drawing numbers shall be assigned in accordance with MSFC-STD-555.

6.3.4 Parts List Numbering. The parts list number shall be the same as the drawing number assigned in accordance with MSFC-STD-555. The parts list and the drawing can be revised independently of each other.

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7. NOTES

None

8. SAFETY PRECAUTIONS AND WARNING NOTES

None

9. RECORDS

None

10. PERSONNEL TRAINING AND CERTIFICATION

None

11. FLOW DIAGRAM

None

12. CANCELLATION

MWI 7120.4, Revision A dated July 10, 2000.

Original signed by
Axel Roth for

A. G. Stephenson
Director

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CHAPTER 1 NOTICES OF AVAILABILITY LIMITATIONS

Notices of availability limitation statements are listed below; refer to NPG 2200.2 and MPD 2190.1 for additional information:

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